

Having described the invention, the following is claimed:

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1. A system for controlling an active suspension component of a vehicle and a vehicle occupant protection device of the vehicle, said system comprising:

a controller, said controller being operatively connected to at least one active suspension component of a vehicle and at least one vehicle occupant protection device of the vehicle; and

at least one sensor for sensing acceleration of the vehicle along at least one axis of the vehicle, said at least one sensor being operatively connected to said controller to provide at least one signal indicative of vehicle acceleration along the at least one axis to said controller, said controller being operative to control the at least one active suspension component in response to said at least one signal, said controller also being operative to control the at least one vehicle occupant protection device in response to said at least one signal.

2. The system as defined in claim 1, wherein said at least one sensor comprises at least one accelerometer.

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3. The system as defined in claim 2, wherein the at least one axis comprises an x-axis of the vehicle, a y-axis of the vehicle and a z-axis of the vehicle.

4. The system as defined in claim 3, wherein said at least one accelerometer comprises a first accelerometer for sensing acceleration of the vehicle along the x-axis, a second accelerometer for sensing acceleration of the vehicle along the y-axis, and a third accelerometer for sensing acceleration of the vehicle along the z-axis.

5. The system as defined in claim 4, wherein said system is free from any other accelerometers that are operative to provide a signal for controlling the at least one active suspension component and the at least one vehicle occupant protection device.

6. The system as defined in claim 4, further comprising a redundant accelerometer for each of said first, second and third accelerometers.

7. The system as defined in claim 2, wherein said at least one accelerometer comprises a multiple axis accelerometer.

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8. The system as defined in claim 1, wherein said controller comprises an electronic controller.

9. The system as defined in claim 1, wherein said controller is a single electronic controller operative to control the at least one active suspension component and the at least one vehicle occupant protection device, said system being free from any other controllers for controlling the at least one active suspension component and the at least one vehicle occupant protection device.

10. The system as defined in claim 1, wherein the at least one vehicle occupant protection device comprises an inflatable vehicle occupant protection device.

11. The system as defined in claim 10, wherein the inflatable vehicle occupant protection device comprises at least one of a front impact air bag inflatable between a vehicle occupant and a dash of the vehicle, a side impact air bag inflatable between a vehicle occupant and a side structure of the vehicle, an inflatable curtain inflatable away from a roof of the vehicle into a position between a vehicle occupant and a side structure of the vehicle, and an inflatable

knee bolster inflatable into a position between legs of a vehicle occupant and a dash of the vehicle.

12. The system as defined in claim 1, wherein the at least one vehicle occupant protection device comprises a seat belt retractor.

13. A system for controlling an active suspension component of a vehicle and a vehicle occupant protection device of the vehicle, said system comprising:

a single electronic controller, said single electronic controller being operatively connected to at least one active suspension component of a vehicle and at least one vehicle occupant protection device of the vehicle; and

at least one accelerometer for sensing acceleration of the vehicle along an x-axis, a y-axis and a z-axis of the vehicle, said at least one accelerometer being operatively connected to said single electronic controller to provide at least one signal indicative of vehicle acceleration along the x-axis, y-axis and z-axis to said single electronic controller, said single electronic controller being operative to control the at least one active suspension component in response to said at least one signal, said

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single electronic controller also being operative to control the at least one vehicle occupant protection device in response to said at least one signal, said system being free from any other controllers for controlling the at least one active suspension component and the at least one vehicle occupant protection device of the vehicle.

14. The system as defined in claim 13, wherein said at least one accelerometer comprises a first accelerometer for sensing acceleration of the vehicle along the x-axis, a second accelerometer for sensing acceleration of the vehicle along the y-axis, and a third accelerometer for sensing acceleration of the vehicle along the z-axis.

15. A method for controlling an active suspension component of a vehicle and a vehicle occupant protection device of the vehicle, said method comprising the steps of:

providing a controller, said controller being operatively connected to at least one active suspension component of a vehicle and at least one vehicle occupant protection device of the vehicle;

providing at least one sensor for sensing acceleration of the vehicle along at least one axis of

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the vehicle, said at least one sensor being operatively connected to said controller to provide a signal indicative of vehicle acceleration along the at least one axis to said controller, said controller performing the steps of:

obtaining said signal from said means for sensing;

determining whether a vehicle roll condition exists and actuating the at least one active suspension component in response to the roll condition;

determining whether a vehicle pitch condition exists and actuating the at least one active suspension component in response to the pitch condition;

determining whether a vehicle impact condition exists and actuating the at least one vehicle occupant protection device in response to the vehicle impact condition; and

determining whether a vehicle rollover condition exists and actuating the at least one vehicle occupant protection device in response to the vehicle rollover condition.

16. The method as defined in claim 15, wherein said step of determining whether a vehicle impact condition exists and actuating the at least one vehicle

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occupant protection device in response to a determined vehicle impact condition comprises the steps of:

determining whether a front impact condition exists and actuating a seat belt restraint and inflatable frontal restraints in response to the front impact condition;

determining whether a rear impact condition exists and actuating a seat belt restraint and inflatable frontal restraints in response to the rear impact condition; and

determining whether a side impact condition exists and actuating a seat belt restraint and inflatable side impact restraints in response to the side impact condition.

17. The method as defined in claim 15, wherein said step of determining whether a vehicle rollover condition exists and actuating the at least one vehicle occupant protection device in response to a determined vehicle rollover condition further comprises the steps of:

determining whether a vehicle rollover condition exists; and

actuating a seat belt restraint, inflatable frontal restraints and inflatable side impact restraints in response to the rollover condition.

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18. The method as defined in claim 15, wherein said step of providing at least one sensor comprises the steps of:

providing a first sensor for sensing vehicle acceleration along an x-axis of the vehicle;

providing a second sensor for sensing vehicle acceleration along a y-axis of the vehicle; and

providing a third sensor for sensing vehicle acceleration along a z-axis of the vehicle.

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